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Memo

DATE: *October 19, 2007*

TO: RHIC E-Coolers

FROM: *Ady Hershcovitch*

SUBJECT: **Minutes of the October 19, 2007 Meeting**

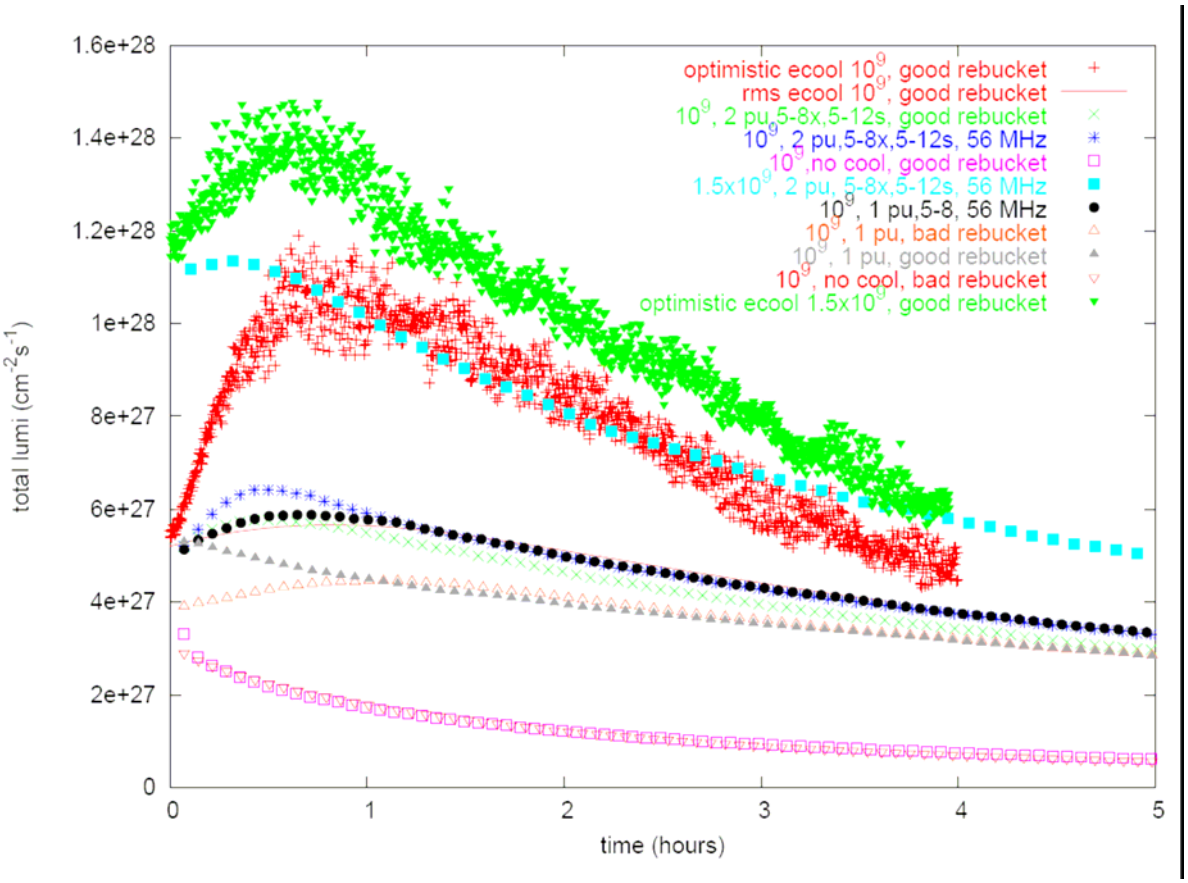
Present: Michael Blaskiewicz, Mike Brennan, Eunmi Choi, Alexei Fedotov, Harald Hahn, Ady Hershcovitch, Vladimir Litvinenko, Dmitry Kayran, Damayanti Naik, Eduard Pozdeyev, Thomas Roser, Vladimir Litvinenko, Thomas Roser, Dejan Trbojevic.

Topic discussed: Stochastic Cooling

Stochastic Cooling: The meeting consisted of a presentation by Mike Blaskiewicz on stochastic cooling plans and a comparison of stochastic and electron beam cooling. Presently, the stochastic cooling band is 5 to 8 GHz. The presentation started by showing the nice cooling effect of stochastic cooling on the RHIC beam, which was followed with a comparison of RHIC stochastic cooling data and simulation results. Excellent agreement exists between the experimental data and simulation results.

Next Mike showed a series of simulations for stochastic cooling of bunches each containing 10^9 gold ions with comparison to electron beam cooling for various scenarios. The figure estimates luminosity as a function of time for various scenarios. We hope to have a system similar to the one in orange triangles installed in the yellow ring next fall.

Below is Mike's slide that summarizes results of various cooling scenarios.


1.6e+28
1.4e+28
1.2e+28
1e+28
8e+27
6e+27
4e+27
2e+27
0
total lumi (cm-2s-1)
0
1
2
3
4
5
time (hours)
optimistic ecool 10^9, good rebucket
rms ecool 10^9, good rebucket
10^9, 2 pu,5-8x,5-12s, good rebucket
10^9, 2 pu,5-8x,5-12s, 56 MHz
10^9,no cool, good rebucket
1.5x10^9, 2 pu, 5-8x,5-12s, 56 MHz
10^9, 1 pu,5-8, 56 MHz
10^9, 1 pu, bad rebucket
10^9, 1 pu, good rebucket
10^9, no cool, bad rebucket
optimistic ecool 1.5x10^9, good rebucket